

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A polyalkene amine formulation, comprising at least one polyalkene amine in a solvent, wherein the formulation has at least one of the following low temperature properties:

- a) a cloud point less than or equal to -28°C (determined to DIN ISO 3015 or DIN EN 23015);
- b) a pour point less than or equal to -27°C (determined to DIN ISO 3016); and/or
- c) no crystalline precipitates after storage at a temperature in the region of about -35°C .

Claim 2 (Currently Amended): The formulation according to claim 1, ~~having a~~ wherein ~~the~~ pour point ~~in the range~~ ranges from about -27 to -55°C and/or a ~~the~~ cloud point ~~in the range~~ ranges from about -28 to -51°C .

Claim 3 (Currently Amended): The formulation according to ~~either of the preceding~~ ~~claims~~ claim 1, wherein the solvent has a density (15°C , ASTM D 4052, EN ISO 12185-1996) in the range from about 650 to 900 kg/m^3 and/or a viscosity (20°C , ASTM D 445) in the range from about 1.0 to $5.0\text{ mm}^2/\text{s}$.

Claim 4 (Currently Amended): The formulation according to ~~any of the preceding~~ ~~claims~~ claim 1, wherein the solvent is selected from linear, branched and cyclic, saturated C_6 - C_{20} hydrocarbons and mixtures thereof.

Claim 5 (Currently Amended): The formulation according to claim 2, wherein the solvent is selected from the group consisting of:

S1) at least one n- or iso-C₁₀-C₁₄ paraffin,

S2) at least one C₁₀-C₁₄ naphthene,

~~or~~ and mixtures thereof.

Claim 6 (Original): The formulation according to claim 5, wherein S1 and S2 are present in a mixing ratio of from 10:90 to 90:10.

Claim 7 (Currently Amended): The formulation according to ~~any of the preceding claims~~ claim 1, wherein the polyalkene moiety of the polyalkene amine is the polymerization product of identical or different, straight-chain or branched C₂-C₆ olefin monomers.

Claim 8 (Original): The formulation according to claim 7, wherein the polyalkene has a number-average molecular weight Mn of from about 200 to 10 000.

Claim 9 (Original): The formulation according to claim 8, wherein the polyalkene is derived from iso-butene or an isobutenic monomer mixture.

Claim 10 (Original): The formulation according to claim 9, wherein the polyalkene is a polyisobutene (PIB).

Claim 11 (Currently Amended): The formulation according to ~~any of the preceding claims~~ claim 1, wherein the polyalkene amine is a polyisobutene amine (PIBA) which is derived from a polyisobutene having at least one of the following properties:

- a) a fraction of vinylidene double bonds of at least 70 mol%, based on polyisobutene;
- b) a polyisobutene polymer structure composed of at least 85% by weight of isobutene units; and
- c) a polydispersity in the range from 1.05 to 7.

Claim 12 (Currently Amended): The formulation according to ~~any of claims 1 to 10~~ claim 1, wherein the polyalkene amine is the reaction product of a polyalkene with an amine of the following general formula I:



wherein

R¹ and R² are each independently H, a C₁-C₁₈-alkyl, C₂-C₁₈-alkenyl, C₄-C₁₈-cycloalkyl, C₁-C₁₈-alkylaryl, hydroxy-C₁-C₁₈-alkyl, poly(oxyalkyl), polyalkylene polyamine or a polyalkylene imine radical; or, together with the nitrogen atom to which they are bonded, are a heterocyclic ring.

Claim 13 (Currently Amended): The formulation according to ~~any of claims 1 to 10~~ claim 1, wherein the PIBA used is the reaction product of the hydroformylation and subsequent reductive amination of reactive PIB.

Claim 14 (Currently Amended): The formulation according to ~~any of the preceding claims~~ claim 1, wherein the solvent is the process solvent of the hydroformylation and subsequent reductive amination of reactive PIB.

Claim 15 (Currently Amended): A PIB formulation comprising PIBA in a mixture comprising a solvent as defined in ~~any of claims 3 to 6~~ claim 3, wherein PIBA is present in a fraction of at least about 63% by weight, based on the total weight of the mixture.

Claim 16 (Currently Amended): A fuel or lubricant composition comprising, in a majority of a fuel or lubricant, an amount, effective as an additive, of a formulation according to ~~any of the preceding claims~~ claim 1.

Claim 17 (Currently Amended): The use of a formulation according to ~~any of claims 1 to 15~~ claim 1

- a) as an additive for fuel or lubricant compositions, or
- b) as an additive for printing inks.

Claim 18 (Original): The use according to claim 17 as an additive for improving the intake system-cleaning action of a gasoline fuel.

Claim 19 (Currently Amended): An additive package comprising a formulation according to ~~any of claims 1 to 15~~ claim 1, if appropriate in combination with at least one further coadditive.

Claim 20 (Currently Amended): The use of a solvent S1, S2 or of a mixture of S1 and S2 as defined in ~~any of claims 3 to 6~~ claim 5 for improving the low temperature performance of PIBA.

Claim 21 (Currently Amended): A process for preparing a polyalkene amine formulation according to ~~any of claims 1 to 15~~ claim 1, wherein

- a) a polyalkene as defined in ~~any of claims 7 to 11~~ claim 7 is dissolved in a solvent as defined in ~~any of claims 3 to 6~~ claim 3;
- b) the solution is hydroformylated in a manner known per se in the presence of CO and H₂; and
- c) the resulting oxo product is aminated under hydrogenating conditions in the presence of an amine of the above formula I in claim 12.

Claim 22 (Original): The process according to claim 21, wherein a solution is preferred in stage a) whose solvent fraction is at most 40% by weight based on the total weight of the solution.